1999 Summary of Indiana Solid Waste Facility Data





Indiana Department of Environmental Management Office of Land Quality 100 North Senate Avenue - P.O. Box 6015 Indianapolis, Indiana 46206-6015 The 1999 Summary of Indiana Solid Waste Facility Data is the eighth in the series of annual reports of solid waste facility activities in Indiana. The information is compiled from solid waste facility quarterly reports submitted to the Indiana Department of Environmental Management (IDEM). The IDEM Office of Land Quality publishes the 1999 Summary of Indiana Solid Waste Facility Data to provide information to the public about solid waste processing and disposal activities in Indiana. This report was prepared by staff of the Facilities Data Analysis Section.

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Table of Contents

| | page |
|--|------|
| NTRODUCTION | . 1 |
| SOLID WASTE DATA FRAMEWORK | . 3 |
| Solid Waste Types | |
| Solid Waste Facilities | |
| Origin of Waste | 7 |
| SOLID WASTE LAND DISPOSAL FACILITIES | 11 |
| Municipal Solid Waste Landfills | |
| Other Solid Waste Land Disposal Facilities | |
| SOLID WASTE PROCESSING FACILITIES | 21 |
| Solid Waste Incinerators | 21 |
| Transfer Stations | 22 |
| Other Processing Facilities | 24 |
| OUT-OF-STATE WASTE | 25 |
| | |
| 999 SOLID WASTE FACILITY PROFILES | 287 |
| Ordered alphabetically by county location of facility) | |

List of Figures

| | | page |
|------------|---|------|
| Figure 1: | Solid Waste Categories in Facility Quarterly Reports Since 1996 | . 4 |
| Figure 2: | Municipal Solid Waste Landfill Ownership by Percent during 1999 | . 7 |
| Figure 3: | Waste Disposal Pathways | |
| Figure 4: | Disposal of Solid Waste by Landfill Type during 1999 | 11 |
| Figure 5: | Disposal of Solid Waste by Waste Type during 1999 | 11 |
| Figure 6: | Annual Disposal at All Solid Waste Land Disposal Facilities | |
| Figure 7: | Disposal of Solid Waste at Municipal Solid Waste Landfills by | |
| | Waste Type during 1999 | 13 |
| Figure 8: | Annual Disposal at Municipal Solid Waste Landfills | 14 |
| Figure 9: | Annual Disposal at Municipal Solid Waste Landfills by Waste Origin | 14 |
| Figure 10: | Distribution of Disposal at Municipal Solid Waste Landfills during 1999 | 15 |
| Figure 11: | Annual Disposal at Construction-Demolition Landfills by Waste Origin | 17 |
| Figure 12: | Annual Disposal at Restricted Waste Landfills by Waste Type | 18 |
| Figure 13: | Transfer Station Waste Management | 22 |
| Figure 14: | Destination of Waste Sent from Transfer Stations during 1999 | 23 |
| Figure 15: | Annual Waste Imports by Region of Origin | 25 |
| Figure 16: | Annual Waste Imports by State of Origin | 27 |
| Figure 17: | Annual Amount of Out-of-State Waste Received by Solid Waste Facilities | 28 |
| Figure 18: | Distribution of Disposal of Out-of-State Waste Received at | |
| | Indiana Final Disposal Facilities | 29 |
| Figure 19: | Origin of Waste Disposed and Incinerated in Indiana during 1999 | 31 |

List of Tables

| | | page |
|-----------|--|------|
| Table 1: | Sources of Solid Waste Data | 2 |
| Table 2: | Solid Waste Classification Guide during 1999 | |
| Table 3: | Number of Solid Waste Facilities Which Operated during 1999 | |
| Table 4: | Types of Landfills and Incinerators | |
| Table 5: | Waste Tons Disposed in Indiana, by Estimated County of Origin | |
| Table 6: | Disposal of Solid Waste by Landfill Type and Waste Type during 1999 | 11 |
| Table 7: | Annual Disposal at Solid Waste Land Disposal Facilities by Landfill Type and | |
| | Waste Type (Includes waste imports to Indiana) | 12 |
| Table 8: | Annual Disposal at Solid Waste Land Disposal Facilities by Landfill Type and | |
| | Waste Type (Excludes waste imports to Indiana) | 12 |
| Table 9: | Total Disposal at Municipal Solid Waste Landfills during 1999 | 16 |
| Table 10: | Total Disposal at Construction-Demolition Landfills during 1999 | |
| Table 11: | Total Disposal at Restricted Waste Landfills during 1999 | |
| Table 12: | Total Disposal at Nonmunicipal Solid Waste Landfills during 1999 | 19 |
| Table 13: | Solid Waste Received by Processing Facilities by | |
| | Waste Type during 1999 | 21 |
| Table 14: | Annual Amount of Solid Waste Received by Processing Facility Type and | |
| | Waste Type | 21 |
| Table 15: | Total Waste Received at Incinerators during 1999 | 22 |
| Table 16: | Destination of Waste Sent from Transfer Stations for Final Disposal | 23 |
| Table 17: | Out-of-State Waste Received during 1999 | 26 |
| Table 18: | Amount of Out-of-State Waste Received by Solid Waste Facilities by | |
| | Facility Type and Waste Type during 1999 | 27 |
| Table 19: | Annual Amount of Out-of-State Waste Received by Solid Waste Facilities by | |
| | Facility Type and Waste Type | 28 |
| Table 20: | Total Out-of-State Waste Received by Facility during 1999 | 30 |
| Table 21: | Out-of-State Waste Received by Indiana Solid Waste Facilities during 1999 | |

INTRODUCTION

This report is the eighth annual summary of Indiana's solid waste facility data. It is intended to provide information about Indiana's solid waste management. The report provides solid waste facility information for 1999 and contains:

- # a summary of existing solid waste facilities;
- # a summary of the amount, origin, and types of solid waste received at land disposal facilities and processing facilities; and
- # a summary of out-of-state waste imports.

This report was compiled from the solid waste facility quarterly reports submitted to IDEM by owners and operators of facilities that manage non-hazardous solid waste. Rules passed by the Solid Waste Management Board require all solid waste land disposal facilities (329 IAC 10-14-1) and processing facilities (329 IAC 11-14-1) to submit information to IDEM on a quarterly basis describing the origin, type, and amount of solid waste received by these facilities. Processing facilities must also report the amount and destination of wastes that are transported off-site for recovery or disposal. Reports submitted to IDEM are on file and available for public review in the IDEM File Room.

This report emphasizes graphs, tables, and figures. Discussion text is included only as necessary to guide the reader through the report and to provide a context for the graphs and tables. Several sections that were included in previous releases of this report are not present in this year's report. Much of the information in these sections has been duplicated from year to year and/or is available in other IDEM publications. Table 1 shows how to obtain this information in addition to other information that may interest readers of this report.

Previous reports summarized municipal solid waste (MSW) landfill capacity from amounts reported by facilities or from estimates made by IDEM. Beginning in 1996, landfills were required by regulation to submit contour maps annually based on surveys conducted between October 1 and December 31 of each year. IDEM uses this information to calculate accurate and precise totals for both airspace and waste capacity. Capacity data for 1997 through 1999 for MSW landfills is expected to be available in a separate IDEM report.

In 1996, IDEM began utilizing revised report forms to provide more detailed nonmunicipal waste information. Changes included the addition of waste categories for foundry wastes, coal ash, and flue gas desulfurization by-products. Prior to 1996, this report summarized nonmunicipal waste only as construction-demolition waste and special/other waste. Because of this, certain nonmunicipal waste types reported since 1996 could not be compared with previous years since those types were not individually reported. Therefore, annual comparisons of disposal by waste type is grouped by municipal waste and nonmunicipal waste in this report. However, information concerning solid waste disposal since 1996 includes all reported waste types.

Table 1. Sources of Solid Waste Data

| Information Available | Description | Contact |
|--|---|-----------------------------------|
| Land disposal facility quarterly reports | Origin, type, and tonnage of solid waste received. * | Minerva Mercado (317) 233-3834 |
| Processing facility quarterly reports | Origin, type, and tonnage of solid waste received and destination information. * | Minerva Mercado (317) 233-3834 |
| Industrial waste quarterly reports | Amount of industrial waste disposed at Indiana municipal landfills | Joyce Billington (317) 308-3131 |
| Composting facility annual reports | Type and volume of compost received and processed. * | Minerva Mercado (317) 233-3834 |
| Transfer station inspection annual reports | Results from inspections of incoming waste for special, infectious, and hazardous waste | Kristi Dixon (317) 308-3391 |
| Waste tire storage facility annual reports | On-site summary of incoming and outgoing tires | Steve Poe (317)308-3112 |
| Municipal waste transportation manifests | Waste generation, transportation, and disposal information that accompanies waste from processing facilities for final disposal | Richard Worth (317) 233-5156 |
| Indiana MSW landfill disposal capacity reports | Remaining air space and disposal space at Indiana land disposal facilities | Richard Worth (317) 233-5156 |
| Solid waste management fee reports (IDOR) | Monthly report showing fees collected for solid waste disposed at final disposal facilities | Pat Williams (317) 232-1859 |
| Solid waste disposal fee reports (IDEM) | Semi-annual report showing fees collected for the disposal of specific types of solid waste | Pat Beeler (317) 233-0408 |
| Solid waste management district annual reports | Information on district programs and activities | Minerva Mercado (317) 233-3834 |
| Indiana solid waste diversion goals | Indiana's progress toward meeting its 35%/50% solid waste diversion goals * | Minerva Mercado (317) 233-3834 |
| Permitted solid waste facilities list | List of permitted solid waste facilities in Indiana * | Debby Baker (317) 232-0066 |

^{*} Online search and/or data download available at: http://www.state.in.us/idem/olq/site_information/requests

SOLID WASTE DATA FRAMEWORK

Several factors must be considered when discussing solid waste disposal in Indiana:

- # type and quantity of the waste disposed;
- # type and ownership of the facility which received the waste; and
- # origin of the waste received.

The following pages give an overview of key concepts necessary for understanding solid waste disposal data.

Solid Waste Types

Solid waste can be broadly categorized as either hazardous waste or non-hazardous waste. This report deals only with **non-hazardous waste**, which can be further broken down into municipal solid waste and all other non-hazardous solid waste. **Municipal solid waste**, or MSW, is any solid waste generated by community activities or the operation of residential or commercial establishments (329 IAC 10-2-115). Non-hazardous waste that is not MSW has been historically subdivided into categories such as **construction-demolition debris**, **special waste**, and other "nonmunicipal" waste types. In 1996, several categories of solid waste were added to the Facility Quarterly Report forms to provide more detailed waste information. Figure 1 shows the solid waste categories used since 1996. A more detailed explanation of these types is provided in Table 2.

Solid Waste Facilities

Solid waste facilities in Indiana fall into two broad permit categories: land disposal facilities and processing facilities. Each category can be further subdivided. **Land disposal facilities** are subdivided into four types: municipal solid waste (MSW) landfills, construction-demolition sites, restricted waste landfills (types 1 through 4), and nonmunicipal solid waste landfills. **Solid waste processing facilities** permitted by IDEM can be incinerators, transfer stations, solid waste balers, solid waste shredders, resource recovery systems, or garbage grinding facilities (329 IAC 11-2-43). Table 3 summarizes the number of permitted solid waste facilities that submitted data reports to IDEM during 1999.

Land Disposal Facilities

Municipal solid waste landfills (MSWLFs) can accept a wide range of solid wastes disposed from residential, commercial, institutional, and industrial sources, except hazardous waste regulated under 329 IAC 3.1. Special waste can be accepted at MSWLFs only in accordance with 329 IAC 10-8.1. Of the four landfill types, only MSWLFs can accept municipal solid wastes (Table 4).

Construction-demolition sites accept only construction or demolition waste materials (329 IAC 10-9-3).

Table 2. Solid Waste Classification Guide during 1999

| ТҮРЕ | GENERAL CATEGORIES | EXAMPLES | | | | |
|--------------------------------------|--|---|--|--|--|--|
| Municipal Solid Waste (MSW) | C Residential - Single- and multi-family units - Other (campgrounds, parks, etc.) C Commercial - Retail and wholesale - Service industry C Institutional - Prisons, hospitals, schools, and universities - Government sector C Industrial non-process / municipal - Offices, lunchrooms, restrooms - Shipping / Receiving activities | - Food wastes - Office wastes - Yard trimmings / vegetation - White goods (appliances) - Automobile parts - Waste tires - Small animal carcasses - Medical wastes | Used pallets Cardboard Furniture Exempt special wastes (generated by a single generator in quantities less than 100 kilograms per month and disposed of in quantities less than 100 kilograms per shipment) CESQG wastes | | | |
| C/D | © Construction / Demolition - Construction industry - Demolition companies | - Uncontaminated solid waste resulting from the construction, remodeling, repair or demolition of structures. For example:Scrap lumber, wallboard | Roofing materials Plumbing and electrical fixtures Bricks, concrete, glass Non-asbestos insulation | | | |
| Foundry | C Foundry Waste | - Waste sand, slag, sludge, core w | aste, dust fines, etc. | | | |
| Special Other | C Special (excluding foundry wastes) Industrial process Pollution control Sludges Waste requiring special waste certification | - Manufacturing process wastes | - Industrial sludges | | | |
| Coal Ash | C Coal Ash | - Coal ash - Fly ash, bottom ash, etc. | - Ash resulting from the combustion of coal | | | |
| FGD Waste | C Flue gas desulfurization byproducts | Scrubber / FGD sludgePollution control sludges resulting | ng from coal combustion | | | |
| Other | C Any other solid waste not regulated as any of the above. | Oil / gas/ mining wastesPesticide containers | - Railroad ties | | | |

CESQG = conditionally exempt small quantity generator PCB = polychlorinated biphenyl FGD = flue gas desulfurization

Figure 1. Solid Waste Categories in Facility Quarterly Reports since 1996

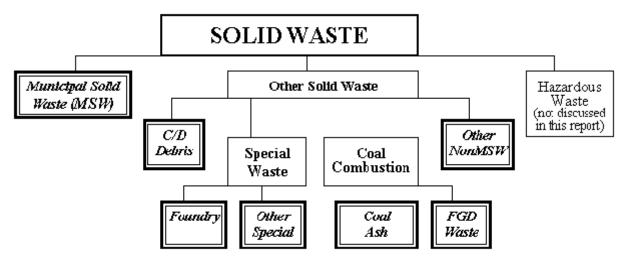


Table 3. Number of Permitted Solid Waste Facilities Operating during 1999

A. Land Disposal Facilities

Municipal Solid Waste Landfills

Construction-Demolition Sites⁽²⁾

Restricted Waste Landfills⁽³⁾

• Privately Owned

• Publicly Owned⁽¹⁾

38 27 11 11

4

72

TOTAL (1) Includes Belmont Ash Monofill which receives municipal incinerator ash.

Nonmunicipal Solid Waste Landfills (3)

- (2) Some facilities are captive sites.
- (3) All facilities are captive sites.
- (4) Incinerators designed to accept at least 10 tons per day.

B. Processing Facilities

| Solid Waste Incinerators (4) | 3 |
|-------------------------------------|----|
| • Municipal | 1 |
| • Industrial ⁽³⁾ | 1 |
| • Hospital | 1 |
| Transfer Stations | 57 |
| Privately Owned | 42 |
| • Publicly Owned | 15 |
| TOTAL | 60 |

A. Landfills

| Type | Acceptable Wastes | Data reported to IDEM | | | | | |
|--------------------------------|--|-----------------------|--|--|--|--|--|
| Municipal Solid Waste Landfill | Municipal waste, construction-demolition debris, special wastes, industrial wastes, other non-municipal wastes | Yes | | | | | |
| Construction-Demolition Site | Construction-demolition debris only (unless otherwise approved by IDEM) | Yes | | | | | |
| Restricted Waste Landfill | Non-municipal waste(s) specified in permit | Yes | | | | | |
| Nonmunicipal Solid Waste | Wastes other than residential and commercial | Yes | | | | | |

B. Incinerators

| Туре | Acceptable Wastes | Data reported to IDEM |
|---------------------------------------|--|-----------------------|
| Large solid waste | Municipal waste, construction-demolition debris, special wastes, industrial wastes, other non-municipal wastes | Yes |
| Small solid waste ⁽¹⁾ | Municipal waste, construction-demolition debris, special wastes, industrial wastes, other non-municipal wastes | No |
| Large infectious waste | Infectious waste (may also accept certain non-infectious waste) | Yes |
| Small infectious waste ⁽²⁾ | Infectious waste (may also accept certain non-infectious waste) | No |

- (1) Incinerators designed to accept less than 10 tons per day (329 IAC 11-19-2).
- (2) Incinerators designed to accept less than 7 tons per day (329 IAC 11-19-2).

Table 4. Types of Landfills and Incinerators

Restricted waste landfills can accept only materials specified in their landfill permits as determined by the classification criteria in 329 IAC 10-9-4. Coal combustion by-products comprise the largest portion of the waste tonnage disposed at restricted waste landfills.

Like restricted waste sites, **nonmunicipal solid waste landfills** can accept only materials specified in their landfill permits. But nonmunicipal solid waste landfills have more stringent design standards than restricted waste sites. All of Indiana's nonmunicipal solid waste landfills are currently captive facilities and therefore, are not available for public use.

In addition to the facility standards discussed here, each individual site may dispose of other materials not included in the above definitions according to their individual permits.

Processing Facilities

The term *incinerator* is broadly defined as an engineered facility designed for the burning of solid waste under controlled conditions. As Table 4 shows, incinerators in Indiana are categorized and regulated as either **solid waste incinerators** or **infectious waste incinerators**.

Solid waste incinerators with a design capacity of at least 10 tons per day and infectious waste incinerators with a design capacity of at least 7 tons per day must obtain a solid waste permit under Indiana solid waste rules 329 IAC 11-9 and 329 IAC 11-17. Other incinerators must notify IDEM and comply with certain operational requirements as stated in 329 IAC 11-19-2 and are deemed to be permitted.

Although incinerators are permitted and regulated under the category of processing facilities, they are considered to be final disposal facilities for planning and disposal fee purposes, as evident in statutory language. The disposal reduction goal language of P.L. 10-1990 also categorizes incineration as a final disposal method.

A **transfer station** is a facility at which solid waste is transferred from a vehicle or container to another vehicle or container for transportation purposes (329 IAC 11-2-47). Transfer stations may manage materials in other ways according to their individual permits. For example, activities at a permitted transfer station may involve only the consolidation of waste loads for further transport, or may also incorporate some form of materials recovery, during which recyclables are segregated for recycling or reuse.

Tire, paper, and medical waste processing sites also are defined as processing facilities by statute, however, no such facilities were in operation during 1999.

Accuracy of Facility Reports

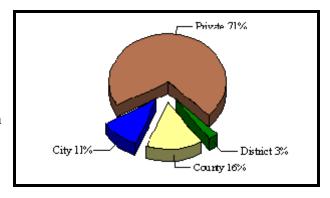
IDEM conservatively estimates that municipal solid waste tonnages may be over-reported by 20 to 40 percent due to some loads of municipal solid waste being mixed with nonmunicipal solid waste, yet identified only as municipal solid waste. According to studies in other states, construction-demolition wastes alone can constitute as much as one-third of municipal solid waste. The portion of municipal

solid waste that is actually special/other waste is unknown. Because of these uncertainties, caution should be used when attempting to draw conclusions regarding exact tonnages of particular waste types.

Municipal Solid Waste Landfill Ownership

Since the facility quarterly report program began in 1991, more of Indiana MSW landfills have been privately-owned than publicly-owned (Table 3). Figure 2 shows the percentages of private and public ownership of MSW landfills in 1998.

Figure 2. Municipal Solid Waste Landfill Ownership by Percent during 1999



Most construction-demolition and restricted waste sites are privately owned. About three-fourths of Indiana's transfer stations and other permitted processing facilities are privately owned.

Origin of Waste

Origin of waste can be broken down by state and by county. A discussion of out-of-state waste is provided beginning on page 25.

Determination of the point of origin of waste by county is difficult due to the manner in which waste is collected and transported to landfills. Waste collection vehicles may transport the waste directly to a landfill and the hauler will report to the landfill operator the county of origin. If the waste collection routes include more than one county as points of origin, the hauler is required to report an estimated percentage of waste for each county to the landfill owner/operator. Furthermore, IDEM guidance instructs land disposal facilities to list the origin of waste received from transfer stations as the county in

Waste is Collected from Single or Multiple Sources

Transfer Station

Waste which is delivered from single or multiple trucks, from single or multiple trucks, from single or multiple counties, and may be commingled before it is sent to the next destination

Recycling or Processing Facility

Figure 3. Waste Disposal Pathways

which the transfer station is located. The extent to which this actually occurs, however, is unknown.

Some waste collection vehicles transport waste to a transfer station, where the hauler is required to report the county (or counties) of origin. The waste received at the transfer station may be commingled with waste from other waste collection vehicles. All or part of the commingled waste may then go to one or more landfills, incinerators, transfer stations, or recycling/processing facilities, where the origin typically is reported as being the county in which the transfer station is located. Figure 3 illustrates the variety of paths that waste can take after it is collected.

In summary, the county identified on some quarterly reports may not be the point of origin, but in fact a transfer point for the waste before it is delivered to the landfill. Table 5 lists estimated amounts disposed at Indiana facilities by county of origin.

Table 5. Waste Tons Disposed in Indiana¹, by Estimated County of Origin

Table 5 is temporarily unavailable.



Table 5 is temporarily unavailable.

SOLID WASTE LAND DISPOSAL FACILITIES

The data in this annual summary reflects the information provided in the solid waste facility quarterly reports as submitted to IDEM. There may be some differences between the numbers published in this summary report and previously published annual reports. The differences primarily are due to improvements in the data quality checks made by IDEM Office of Land Quality.

Table 6 displays the amount of solid waste disposed at Indiana land disposal facilities by each reported waste type during 1999. Figure 4 displays this information by landfill type, and Figure 5 by waste type. Table 7 displays similar information from 1991 through 1999 for municipal and nonmunicipal waste. Table 8 shows waste reported to originate from Indiana only. Waste received at solid waste incinerators is discussed on page 21 in the chapter on processing facilities.

Table 6. Disposal of Solid Waste by Landfill Type and Waste Type during 1999

| | Tons of Waste Disposed | | | | | | |
|---------------|---------------------------------------|------------------------|-----------|--|------------------|--|--|
| Waste Type | Municipal Solid Waste Landfills | Solid Waste Demolition | | Nonmunicipal Solid Waste Landfills | All Landfills | | |
| Municipal | 6,793,153 | 0 | 0 | 0 | 6,793,153 | | |
| C/D | 824,168 | 215,948 | 5,200 | 0 | 1,045,316 | | |
| Foundry | 121,956 | 0 | 750,662 | 0 | 872,618 | | |
| Other Special | 1,831,677 | 4,466 | 99,526 | 51,804 | 1,987,473 | | |
| Coal Ash | 168,152 | 0 | 672,483 | 0 | 840,635 | | |
| FGD Waste | 0 | 0 | 1,842,536 | 0 | 1,842,536 | | |
| Other NonMSW | 210,013 | 0 | 0 | 19,327 | 229,340 | | |
| TOTAL | 9,949,119 | 220,414 | 3,370,407 | 71,131 | 13,611,071 | | |

Figure 4. Disposal of Solid Waste by Landfill Type during 1999

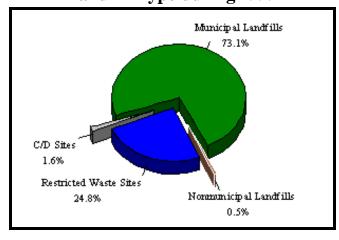


Figure 5. Disposal of Solid Waste by Waste Type during 1999

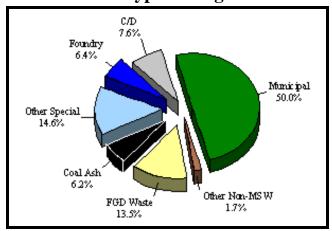


Table 7. Annual Disposal at Solid Waste Land Disposal Facilities by Landfill Type and Waste Type

(Includes waste imports to Indiana)

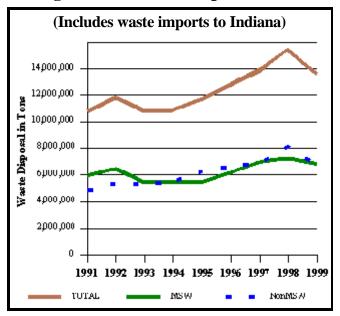
| Landfill | Waste | Tons of Waste Disposed | | | | | | | | |
|---------------|------------|------------------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Type | Type | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
| Municipal | MSW | 5,917,315 | 6,435,161 | 5,439,663 | 5,404,144 | 5,457,806 | 6,182,558 | 6,957,586 | 7,261,741 | 6,793,153 |
| Solid Waste | NonMS W | 1,479,025 | 1,919,670 | 1,966,400 | 1,820,831 | 2,277,228 | 2,503,407 | 2,898,111 | 3,202,747 | 3,155,966 |
| Landfills | TOTAL | 7,396,340 | 8,354,831 | 7,406,063 | 7,224,975 | 7,735,034 | 8,685,965 | 9,855,697 | 10,464,488 | 9,949,119 |
| Construction/ | MSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (|
| Demolition | NonMS W | 113,224 | 120,502 | 146,491 | 156,718 | 144,773 | 212,448 | 187,725 | 192,713 | 220,414 |
| Sites | TOTAL | 113,224 | 120,502 | 146,491 | 156,718 | 144,773 | 212,448 | 187,725 | 192,713 | 220,414 |
| Restricted | MSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (|
| Waste | NonMS W | 3,200,387 | 3,272,803 | 3,152,091 | 3,431,672 | 3,828,695 | 3,824,287 | 3,740,680 | 4,689,484 | 3,370,407 |
| Landfills | TOTAL | 3,200,387 | 3,272,803 | 3,152,091 | 3,431,672 | 3,828,695 | 3,824,287 | 3,740,680 | 4,689,484 | 3,370,407 |
| Nonmunicipal | MSW | 2,300 | 2,636 | 3,289 | 2,818 | 3,695 | 3,056 | 2,819 | 1,643 | (|
| Solid Waste | NonMS W | 80,513 | 65,314 | 33,429 | 34,988 | 33,359 | 28,355 | 34,123 | 44,366 | 71,131 |
| Landfills | TOTAL | 82,813 | 67,950 | 36,718 | 37,806 | 37,054 | 31,411 | 36,942 | 46,009 | 71,131 |
| All Landfills | MSW | 5,919,615 | 6,437,797 | 5,442,952 | 5,406,962 | 5,461,501 | 6,185,614 | 6,960,405 | 7,263,384 | 6,793,153 |
| | NonMS W | 4,873,149 | 5,378,289 | 5,298,411 | 5,444,209 | 6,284,055 | 6,568,497 | 6,860,639 | 8,129,310 | 6,817,918 |
| | TOTAL | 10,792,764 | 11,816,086 | 10,741,363 | 10,851,171 | 11,745,556 | 12,754,111 | 13,821,044 | 15,392,694 | 13,611,071 |

Table 8. Annual Disposal at Solid Waste Land Disposal Facilities by Landfill Type and Waste Type

(Excludes waste imports to Indiana)

| Landfill | Waste | | | | Tons of | f Waste D | isposed | | | |
|---------------|--------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|
| Type | Type | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
| Municipal | MSW | 4,555,613 | 4,786,065 | 4,746,814 | 4,903,029 | 4,616,681 | 4,661,109 | 4,856,749 | 5,103,908 | 5,318,629 |
| Solid Waste | NonMSW | 1,388,449 | 1,724,787 | 1,837,649 | 1,785,798 | 2,194,894 | 2,191,770 | 2,359,467 | 2,546,711 | 2,563,698 |
| Landfills | TOTAL | 5,944,062 | 6,510,852 | 6,584,463 | 6,688,827 | 6,811,575 | 6,852,879 | 7,216,216 | 7,650,619 | 7,882,327 |
| Construction/ | MSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Demolition | NonMSW | 113,224 | 120,502 | 146,491 | 153,421 | 137,998 | 135,050 | 148,257 | 163,479 | 197,316 |
| Sites | TOTAL | 113,224 | 120,502 | 146,491 | 153,421 | 137,998 | 135,050 | 148,257 | 163,479 | 197,316 |
| Restricted | MSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Waste | NonMSW | 3,200,387 | 3,272,803 | 3,152,091 | 3,431,672 | 3,828,695 | 3,824,287 | 3,740,680 | 4,689,484 | 3,370,407 |
| Landfills | TOTAL | 3,200,387 | 3,272,803 | 3,152,091 | 3,431,672 | 3,828,695 | 3,824,287 | 3,740,680 | 4,689,484 | 3,370,407 |
| Nonmunicipal | MSW | 2,300 | 2,636 | 3,289 | 2,818 | 3,695 | 3,056 | 2,819 | 1,643 | 0 |
| Solid Waste | NonMSW | 80,513 | 65,314 | 33,429 | 34,988 | 33,359 | 28,355 | 34,123 | 41,962 | 49,300 |
| Landfills | TOTAL | 82,813 | 67,950 | 36,718 | 37,806 | 37,054 | 31,411 | 36,942 | 43,605 | 49,300 |
| All Landfills | MSW | 4,557,913 | 4,788,701 | 4,750,103 | 4,905,847 | 4,620,376 | 4,664,165 | 4,859,568 | 5,105,551 | 5,318,629 |
| | NonMSW | 4,782,573 | 5,183,406 | 5,169,660 | 5,405,879 | 6,194,946 | 6,179,462 | 6,282,527 | 7,441,636 | 6,180,721 |
| | TOTAL | 9,340,486 | 9,972,107 | 9,919,763 | 10,311,726 | 10,815,322 | 10,843,627 | 11,142,095 | 12,547,187 | 11,499,350 |

Figure 6. Annual Disposal at All Solid Waste Land Disposal Facilities





Municipal Solid Waste Landfills

Most questions about land disposal facilities deal primarily with municipal solid waste (MSW) landfills. MSW landfills receive waste materials from residences, businesses, institutions, and industries. As a result of the wide range of waste types these landfills receive, they are built to a more stringent landfill design criteria than, for example, a construction-demolition site that accepts only construction-demolition wastes. Note that Figure 9

shows the disposal of out-of-state waste vs. Indiana waste at MSW landfills. A more detailed discussion of out-of-state waste is provided beginning on page 25.

Figure 10 shows the distribution of disposal among MSW landfills. Notice that about one third (34%) of MSW landfills accepted less than 100,000 tons of solid waste.

Table 9 summarizes total disposal at individual MSW landfills during 1999. More detailed disposal data for all solid waste disposal facilities is given at the end of this report in "1999 Solid Waste Facility Profiles."

Figure 7. Disposal of Solid Waste at Municipal Solid Waste Landfills by Waste Type during 1999

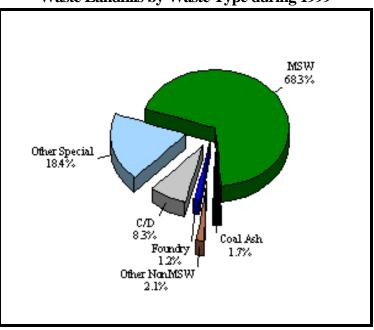
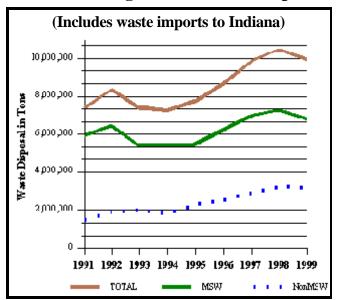


Figure 8. Annual Disposal at Municipal Solid Waste Landfills



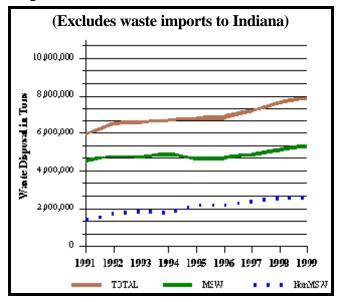
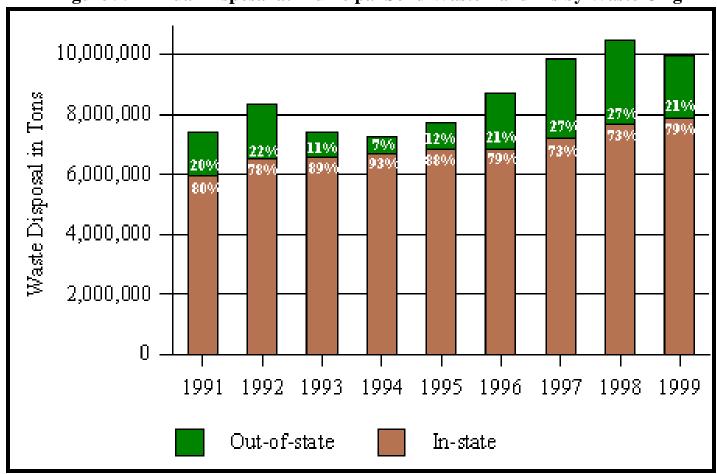


Figure 9. Annual Disposal at Municipal Solid Waste Landfills by Waste Origin



Waste Disposal in Tons 600,000 900,000 1,200,000 1,500,000 300,000 0 Cumulative Percent of Total Disposalat Municipal Solid Waste Landfills (9,949,119 tons) Newton County Landfill Twin Bridges RDF 24% of (or 9) County Line Landfill landfills Macbeth Road Landfill disposed of Southside Landfill 62% of the Deercroft RDF waste Oak Ridge RDF Wabash Valley Landfill Earthmovers Landfill Laub scher Me adows Landfill Jay County Landfill Blackfoot Landfill The remaining Victory Environmental Landfill 76% of (or 29) Prairie View RDF landfills Worthington Landfill disposed of Medora Sanitary Landfill 38% of the Midwest Disposal Landfill Belmont Ash Landfill waste. Kosciusko Landfill Clark-Floyd Landfill Randolph Farms Landfill Minster Landfill Caldwell Landfill Liberty Landfill Elkhart County Landfill Decatur Hills Landfill Bartholomew County Landfill II New Paris Pike Landfill United Refuse Landfill Hayes Landfill Huntington City Landfill Monroe County Landfill Washington County Landfill Daviess County Landfill West Clinton Landfill Bartholomew County Landfill Crane NSWC Landfill Sullivan County Landfill 40% 0% 20% 60% 80% 100% 120% Cumulative Percent of Total Disposal Cumulative Percent of Total Disposal (Y1) | Waste Disposal (Y2)

Figure 10. Distribution of Disposal at Municipal Solid Waste Landfills during 1999

Table 9. Total Disposal at Municipal Solid Waste Landfills During 1999

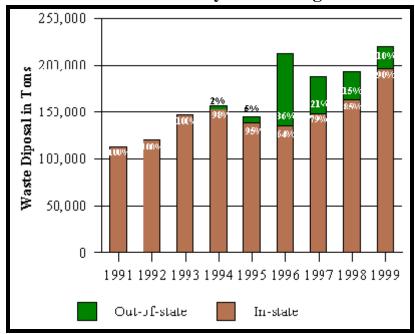
| County Location of Facility | Facility Name | Waste Disposal in Tons | # of Operating Days | Disposal Per Operating Day |
|-----------------------------------|--|------------------------------|---------------------------|----------------------------------|
| Allen | Macbeth Road Landfill | 628,336 | 305 | 2,060 |
| Allen | United Refuse Landfill | 67,659 | 155 | 437 |
| Bartholomew | Bartholomew County Landfill | 8,370 | 38 | 220 |
| Bartholomew | Bartholomew County Landfill II | 68,261 | 279 | 245 |
| Cass | Oak Ridge Recycling and Disposal Facility | 406,034 | 310 | 1,310 |
| Clark | Clark-Floyd Landfill | 143,953 | 306 | 470 |
| Clinton | Midwest Disposal Landfill | 175,023 | 311 | 563 |
| Daviess | Daviess County Landfill | 14,269 | 304 | 47 |
| Decatur | Decatur Hills Landfill | 94,255 | 308 | 306 |
| Elkhart | Earthmovers Landfill | 385,067 | 294 | 1,310 |
| Elkhart | Elkhart County Landfill | 96,742 | 284 | 341 |
| Fulton | County Line Landfill | 807,409 | 309 | 2,613 |
| Greene | Worthington Landfill | 250,204 | 310 | 807 |
| Hendricks | Twin Bridges Recycling and Disposal Facility | 1,014,911 | 312 | 3,253 |
| Henry | Hayes Landfill | 58,469 | 307 | 190 |
| Huntington | Huntington City Landfill | 25,778 | 300 | 86 |
| Jackson | Medora Sanitary Landfill | 176,513 | 287 | 615 |
| Jay | Jay County Landfill | 342,429 | 303 | 1,130 |
| Kosciusko | Kosciusko Landfill | 157,251 | 309 | 509 |
| Lake | Munster Landfill | 126,396 | 258 | 490 |
| La Porte | Deercroft Recycling and Disposal Facility | 544,913 | 305 | 1,787 |
| Marion | Southside Landfill | 588,720 | 310 | 1,899 |
| Marion | Belmont Ash Landfill | 166,448 | 312 | 533 |
| Martin | Crane Naval Surface Warfare Center Landfill | 4,681 | 246 | 19 |
| Monroe | Monroe County Landfill | 24,368 | 307 | 79 |
| Newton | Newton County Landfill Partnership | 1,416,299 | 308 | 4,598 |
| Pike | Blackfoot Landfill | 334,568 | 311 | 1,076 |
| Randolph | Randolph Farms Landfill | 141,739 | 311 | 456 |
| St. Joseph | Prairie View Recycling and Disposal Facility | 276,201 | 309 | 894 |
| Shelby | Caldwell Landfill | 107,270 | 310 | 346 |
| Sullivan | Sullivan County Landfill | 707 | 224 | 3 |
| Vanderburgh | Laubscher Meadows Landfill | 366,379 | 310 | 1,182 |
| Vermillion | West Clinton Landfill | 11,464 | 283 | 41 |
| Vigo | Victory Environmental Landfill | 328,065 | 308 | 1,065 |
| Wabash | Wabash Valley Landfill | 402,547 | 310 | 1,299 |
| Washington | Washington County Landfill | 19,124 | 305 | 63 |
| Wayne | New Paris Pike Landfill | 67,719 | 248 | 273 |
| White | Liberty Landfill | 100,578 | 91 | 1,105 |
| Total for all M | unicipal Solid Waste Landfill | 9,949,119 | | |

Other Solid Waste Land Disposal Facilities

Construction-Demolition Sites

Construction-demolition sites receive a limited range of wastes, as specified in the facility permit. They represent a relatively small amount of the total waste disposed in Indiana, as shown previously in Figure 4. In the early 1990's, construction-demolition sites did not receive a significant amount of out-of-state waste, as shown in Figure 11. In 1996, however, the amount of out-of-state waste received at construction-demolition sites increased from 5 to 36 percent. Lower percentages of outof-state C/D waste were received by construction-demolition sites

Figure 11. Annual Disposal at Construction-Demolition Sites by Waste Origin (1)



between 1997 and 1999. Table 10 provides a listing of the construction-demolition landfills and the total amount of waste each facility received in 1999.

Table 10. Total Disposal at Construction-Demolition Sites during 1999

| County Location of Facility | Facility Name | Waste Disposal In Tons |
|-------------------------------|------------------------------------|---------------------------|
| Allen | M & M C/D Site | 167 |
| Elkhart | Warner & Sons Inc. C/D Site | 70,623 |
| Lake | Feddeler C/D Site (1) | 47,002 (1) |
| Madison | Industrial Removal C/D Site | 12,123 |
| Marion | Dorsey Paving C/D Site | 5,316 |
| Monroe | Monroe County SWMD C/D Landfill | 17,560 |
| Pike | Velpen Solid C/D Site | 18,669 |
| Posey | Springfield Environmental C/D Site | 28,094 |
| Tippecanoe | Purdue University C/D Site | 2,538 |
| Vermillion | West Clinton II C/D Site | 7,285 |
| Wayne | New Paris Pike C/D Site | 11.037 |
| Total for All Construction-De | 220,414 (1) | |

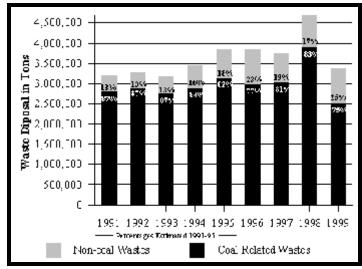
⁽¹⁾ Incomplete data: Feddeler C/D Site did not submit a fourth quarter report to IDEM .

Restricted Waste Landfills

Restricted waste landfills also receive a limited range of wastes, as specified in the facility permit. Most sites are ash, sludge, or foundry monofills. A large number of the landfills are monofills that receive coal combustion wastes from power plants.

These coal combustion wastes accounted for 75 percent of the total tonnage disposed at restricted waste landfills in 1999 (Figure 12). Note that prior to 1996, coal combustion wastes were not individually reported waste types on the solid waste facility quarterly reporting program. Before 1996, the amount of coal-related wastes disposed was

Figure 12. Annual Disposal at Restricted Waste Landfills by Waste Type



estimated based on the amount of waste received at specific types of restricted waste sites related to coal combustion.

The total waste disposed each year in restricted waste landfills is much larger than the amount received at construction-demolition landfills, although not as large as the amount of waste received by municipal solid waste landfills (Figure 4).

Table 11. Total Disposal at Restricted Waste Landfills during 1999 (1)

| County Location of Facility | Facility Name | Waste Disposal In Tons | | |
|------------------------------------|---|------------------------|--|--|
| Bartholomew | City Garage Site RWS 3 | 79,401 | | |
| De Kalb | Auburn Foundry RWS 3 (1) | 19,112 (1) | | |
| Fountain | Harrison Steel Cast RWS 3 | 31,949 | | |
| Gibson | Gibson Station Scrubber RWS 2 | 914,993 | | |
| Jasper | Schahfer FGD Sludge RWS 1 | 141,118 | | |
| Jefferson | Clifty Creek Coal Ash Disposal RWS 3 | 54,248 | | |
| Knox | Scepter Industries RWS 1 | 1,560 | | |
| Kosciusko | Dalton Foundry RWS 3 | 135,025 | | |
| Lake | U.S. Steel - Gary Works RWS 1 | 323,787 | | |
| Noble | Newman Manufacturing RWS 3 | 52,979 | | |
| Perry | Waupaca Foundry RWS 3 | 125,301 | | |
| Pike | Petersburg Generating Station RWS 3 | 92,311 | | |
| Porter | Yard 520 RWS 3 | 695 | | |
| Posey | SIGECO Filter Cake Disposal RWS 3 | 276,220 | | |
| Posey | McCarty RWS 3 | 23,555 | | |
| Spencer | Rockport Plant Ash RWS 2 | 128,391 | | |
| Sullivan | Merom Station RWS 2 | 889,724 | | |
| Wabash | Ford Meter Box RWS 3 | 3,012 | | |
| Wabash | Wabash Alloys RWS 1 | 77,026 | | |
| Total for All Restricted Waste La | Total for All Restricted Waste Landfills (1): | | | |

⁽¹⁾ **Incomplete data**: Auburn Foundry did not submit quarterly reports to IDEM for first, third and fourth quarters.

18

No restricted waste landfills have reported receiving out-of-state waste since 1991. Table 11 provides a listing of the restricted waste landfills and the total amount of waste each facility received during 1999.

Nonmunicipal Solid Waste Landfills

The 1996 rules introduced the terms municipal solid waste (MSW) landfill and nonmunicipal solid waste (NonMSW) landfill, which have been used throughout this report. In previous reports, NonMSW landfills were grouped with MSW landfills under the general heading of "sanitary landfills." MSW landfills were discussed earlier in this section. There are only a few NonMSW landfills in Indiana and currently all are captive facilities and therefore, are not available for public use. Table 12 provides a listing of the nonmunicipal solid waste landfills and the total amount of waste each facility received during 1999.

Table 12. Total Disposal at Nonmunicipal Solid Waste Landfills during 1999

| County Location of Facility | Facility Name | Waste Disposal In Tons |
|---------------------------------|--|---------------------------|
| Monroe | Dillman Road WWTP Landfill | 11,133 |
| Putnam | Heritage Landfill | 35,034 |
| Vermillion | Inland Container Nonmunicipal Solid Waste LF | 11,946 |
| Warrick | ALCOA Sanitary Landfill | 13,018 |
| Total for All Nonmunicipal Soli | 71,131 | |

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SOLID WASTE PROCESSING FACILITIES

Solid waste processing facilities include:

- # solid waste incinerators:
- # transfer stations; and
- # other processing facilities.

Table 13 displays the amount of solid waste received by permitted Indiana incinerators (excluding small incinerators) and transfer stations by each reported waste type during 1999. Table 14 displays similar information from 1991 through 1999 for municipal and nonmunicipal waste. More detailed data for all solid waste processing facilities is given at the end of this report in "1999 Solid Waste Facility Profiles." Other processing facilities are discussed later in this section.

Table 13. Solid Waste Received by Processing Facilities by Waste Type during 1999

| Waste | Tons of Waste Disposed | | | | |
|---------------|---------------------------|----------------------|--|--|--|
| Type | Incinerators ¹ | Transfer Stations | | | |
| Municipal | 669,718 | 1,929,141 | | | |
| C/D | 0 | 461,475 | | | |
| Foundry | 0 | 0 | | | |
| Other Special | 27,901 | 0 | | | |
| Coal Ash | 0 | 0 | | | |
| FGD Waste | 0 | 0 | | | |
| Other NonMSW | 0 | 11,762 | | | |
| TOTAL | 697,619 | 2,402,378 | | | |

Table 14. Annual Amount of Solid Waste Received by Processing Facility Type and Waste Type

(Includes waste imports to Indiana)

| Facility | Waste | | Tons of Waste Received | | | | | | | Tons of Waste Receive | | | | | | |
|-------------------|--------|---------|------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------------------|--|--|--|--|--|--|
| Type | Type | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | | | | | | |
| Incinera- | MSW | 672,616 | 691,546 | 731,929 | 687,198 | 682,249 | 689,859 | 681,147 | 670,380 | 669,718 | | | | | | |
| tors ¹ | NonMSW | 23,672 | 34,858 | 33,736 | 21,198 | 22,439 | 22,839 | 28,183 | 25,552 | 27,901 | | | | | | |
| | TOTAL | 696,288 | 726,404 | 765,665 | 708,396 | 704,688 | 712,698 | 709,330 | 695,932 | 697,619 | | | | | | |
| Transfer | MSW | 774,589 | 873,466 | 981,681 | 1,210,393 | 1,409,747 | 1,434,712 | 1,522,361 | 1,735,021 | 1,929,141 | | | | | | |
| Stations | NonMSW | 139,886 | 188,653 | 232,438 | 206,450 | 184,807 | 291,183 | 404,897 | 475,363 | 473,237 | | | | | | |
| | TOTAL | 914,475 | 1,062,119 | 1,214,119 | 1,416,843 | 1,594,554 | 1,725,895 | 1,927,258 | 2,210,384 | 2,402,378 | | | | | | |

Solid Waste Incinerators

For reporting and permitting purposes, solid waste incinerators are regarded as processing facilities. For solid waste planning and fee purposes, incinerators are considered as final disposal facilities. Table 15 provides a list of the permitted solid waste incinerators which operated in 1999 and the total amount of solid waste received by these facilities. The list does not include more than 200 small-capacity incinerators currently operating and deemed permitted in Indiana.

 $^{^{1}}$ Does not include incinerators receiving less than 10 tons/day of solid waste, or less than 7 tons/day of infectious waste.

Table 15. Total Waste Received at Incinerators during 1999

(does not include hospital incinerators)

| County Location of Facility | Facility Name | Waste Received In Tons |
|--------------------------------|--|---------------------------|
| Marion | Ogden-Martin Systems of Indianapolis | 671,070 |
| Marion | St. Vincent Hospital Incinerator | 2,129 |
| Posey | General Electric Ultem Thermal Oxidizer System | 24,420 |
| Total for All Incinerators: | | 697,619 |

As Table 15 shows, Ogden-Martin Systems of Indianapolis received the greatest amount of waste of any permitted incinerator. The tonnage received annually at this facility is roughly equivalent to 4 percent of the total tonnage of waste either land disposed or incinerated in Indiana. From the waste received by the Ogden-Martin Systems of Indianapolis during 1999, there were about 167,000 tons of ash produced and delivered to the Belmont Ash Landfill for disposal.

Transfer Stations

Transfer stations are facilities that allow waste from individual collection vehicles to be offloaded and then reloaded into larger vehicles for transport to final disposal facilities. Some transfer stations recover recyclable materials to be sent to processing or recycling facilities.

The accountability for differences in incoming and outgoing waste at transfer stations has improved over the years. Although for the first few years of quarterly reporting there was no mechanism to track such differences, reporting forms have been improved since to include material recovery. Facilities are also required to submit a written explanation if the difference in tonnages is due to a reason other than materials recovery. In most instances, differences in incoming and

Figure 13. Transfer Station Waste Management

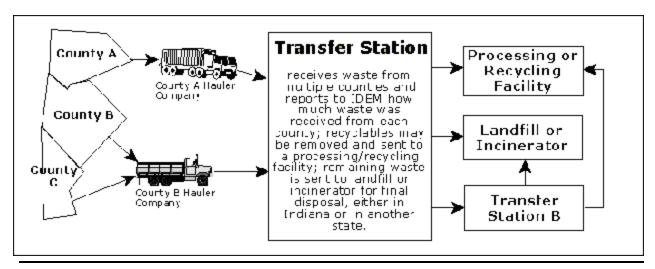


Table 16. Destination of Waste Sent from Transfer Stations for Final Disposal

| Year | Total Tons Sent | To Indiana Facilities | | To Out-of-Stat | e Facilities | |
|-------------------|------------------------|-----------------------|-----|----------------|--------------|--|
| To All Facilities | | Tonnage % of Total | | Tonnage | % of Total | |
| 1991 | 821,417 | 770,609 | 94% | 50,808 | 6% | |
| 1992 | 987,797 | 971,031 | 98% | 16,766 | 2% | |
| 1993 | 1,161,036 | 1,107,576 | 95% | 53,460 | 5% | |
| 1994 | 1,347,550 | 1,200,340 | 89% | 147,210 | 11% | |
| 1995 | 1,547,478 | 1,372,298 | 89% | 175,180 | 11% | |
| 1996 | 1,683,462 | 1,512,391 | 90% | 171,071 | 10% | |
| 1997 | 1,891,568 | 1,684,731 | 89% | 206,837 | 11% | |
| 1998 | 2,136,790 | 1,923,947 | 90% | 212,843 | 10% | |
| 1999 | 2,308,549 | 2,087,756 | 90% | 220,793 | 10% | |

outgoing tonnages are the result of materials recovery or differences in volume-to-tons conversions.

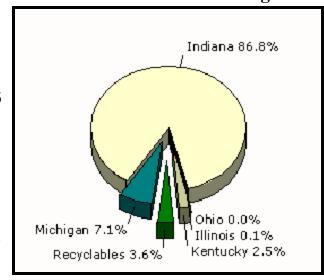
As discussed on page 7, it is difficult to track the true origin of waste. Waste collection vehicles may transport the waste directly to a landfill or they may take waste to a transfer station. A landfill receiving waste from a transfer station is instructed to document the waste as originating from the county in which the transfer station is located, regardless of whether any of the waste was generated in that county. The issue is further complicated when the transfer station receives waste from two or more counties, mixes the loads in a central location, removes various recyclables, then transports the waste to two or more landfills, another transfer station and/or a recycling facility. Figure 13 illustrates how the tonnage received from the counties may be known, but the waste sent for final disposal or processing may not directly identify the point of origin.

Quarterly reports from transfer stations currently provide the only source of systematic information on the

amount of waste exported by Indiana. Table 16 shows the amount of waste sent out-of-state from transfer stations as compared to the amount of waste sent to Indiana final disposal facilities during 1991 to 1999. Figure 14 shows a more detailed breakdown of the destination information for 1999. This information does not provide a complete picture of Indiana waste exports, because the totals in Table 16 are based only on information obtained from processing facility quarterly reports. The amount of waste hauled directly from an Indiana residence or business to an out-of-state destination is not adequately known due to reporting limitations.

More detailed data for transfer stations is given at the end of this report in "1999 Solid Waste Facility

Figure 14. Destination of Waste Sent from Transfer Stations during 1999



Profiles."

Other Processing Facilities

Other processing facilities permitted by IDEM could include paper, and medical waste processing facilities. None of the facilities operating during 1999 could be classified under this other category.

IDEM issues permits to any solid waste processing facility upon which is located a solid waste incinerator, transfer station, solid waste baler, solid waste shredder, resource recovery system, composting facility or garbage grinding facility (as defined in 329 IAC 11-2-43, unless excluded by 329 11-3-1).

OUT-OF-STATE WASTE

Solid waste imported to Indiana from out-of-state sources can be received at landfills, incinerators, or transfer stations. The following discussion focuses on data for all facilities which have received out-of-state waste, with the exception of paper, tire, and medical processing facilities. Historically, these three types of processing facilities have received only small amounts of out-of-state waste, and therefore are not included in the following discussion. In addition, no paper, tire or medical processing facility operated in Indiana during 1999.

Since 1992, the predominant states of origin for solid waste imports have been the four contiguous states (Illinois, Michigan, Ohio, and Kentucky). As Figure 15 shows, the portion of out-of-state waste originating from non-contiguous states has decreased dramatically since 1991, and by 1995 accounted for less than 1 percent of Indiana's total imports. In 1999, no waste was received from East Coast states for the first time since the implementation of facility quarterly reports. Figure 15 also shows that despite a significant drop in the amount of out-of-state waste received by Indiana facilities from 1992 to 1994, waste imports increased significantly in 1995 and doubled in 1996. Out-of state waste received by Indiana facilities increased further from 1996 to 1998 by 32 percent to their highest level in the last seven years (almost 2.9 million tons). This increasing trend did not continue into 1999, when out-of-state waste received by Indiana facilities decreased. In 1999, out of state waste accounted for 15 percent of the waste disposed at all of Indiana's landfills and 21 percent of the waste disposed in MSW landfills.

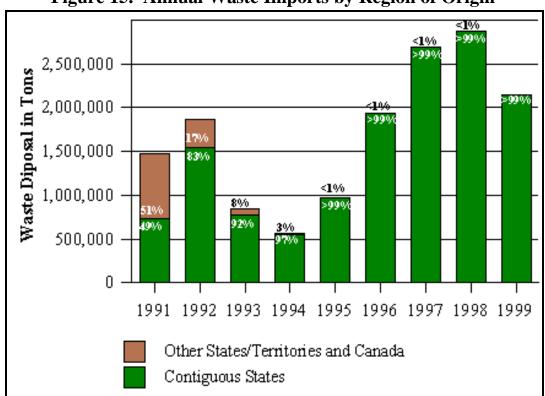


Figure 15. Annual Waste Imports by Region of Origin

Table 17. Out-of-State Waste Received during 1999

| #State | Tons | | Total Tons. | 2,147,830 | |
|-------------|-----------|------------|-------------|----------------|--------|
| County Name | Received | | | | |
| #Illinois | 1,779,180 | Harding | 55 | Williams | 66 |
| Champaign | 187 | Henderson | 59,451 | #Michigan | 37,021 |
| Clark | 1,433 | Jefferson | 11,308 | Berrien | 3,190 |
| Coles | 2 | Meade | 8 | Branch | 21,774 |
| Cook | 1,741,955 | Mercer | 83 | Cass | 5,534 |
| Crawford | 11,977 | #Ohio | 151,614 | Genesee | 12 |
| Du Page | 916 | Allen | 8 | St. Joseph | 6,511 |
| Edgar | 4,459 | Auglaize | 981 | #Wisconsin | 1,274 |
| Jasper | 17 | Cuyahoga | 395 | Milwaukee | 961 |
| Kankakee | 3,597 | Darke | 42,306 | Winnebago | 313 |
| Lawrence | 544 | Defiance | 22 | #Missouri | 1,935 |
| Marion | 7 | Franklin | 130 | Jackson | 1,281 |
| Richland | 19 | Hamilton | 21,623 | St. Louis | 654 |
| Гazewell | 50 | Mercer | 517 | #California | 93 |
| UNKNOWN | 23 | Miami | 69,242 | Los Angeles | 93 |
| Vermilion | 288 | Montgomery | 469 | #Kansas | 60 |
| Wabash | 4,222 | Paulding | 1,182 | Doniphan | 60 |
| White | 6 | Preble | 117 | #Nevada | 155 |
| Will | 9,478 | Shelby | 68 | Storey | 155 |
| #Kentucky | 176,376 | Summit | 205 | #Texas | 122 |
| Daviess | 105,431 | UNKNOWN | 4 | Bexar | 122 |
| Fayette | 40 | Van Wert | 14,279 | | |

Table 17 details the state origin and amount of out-of-state waste received at Indiana solid waste facilities during 1999. Figure 16 shows this information from 1991 through 1999. Illinois has been historically the largest source of waste imported to Indiana. In 1999, Illinois waste accounted for 83 percent of the out-of-state received by Indiana solid waste facilities. Nearly all of that waste came from the Chicago area.

Table 18 displays the amount of out-of-state waste received by Indiana's permitted solid waste facilities by each reported waste type during 1999. Table 19 displays similar information from 1991 through 1999 for municipal and nonmunicipal waste. MSW landfills have consistently received most of the waste imported from other states. Figure 17 shows that municipal solid waste has historically accounted for the largest percentage of waste imports. However, nonmunicipal waste imports have risen considerably since 1995.

Figure 18 shows the distribution of the disposal of out-of-state waste among Indiana land disposal facilities. As Figure 18 shows, a relatively few number of facilities disposed of the majority of imported waste. Of the twenty-four final disposal facilities (23 landfills and 1 incinerator) that received out-of-state waste during 1999, 16% of the landfills disposed of four-fifths of the imported waste. In addition, almost all of the imported waste received by these four facilities was from Illinois.

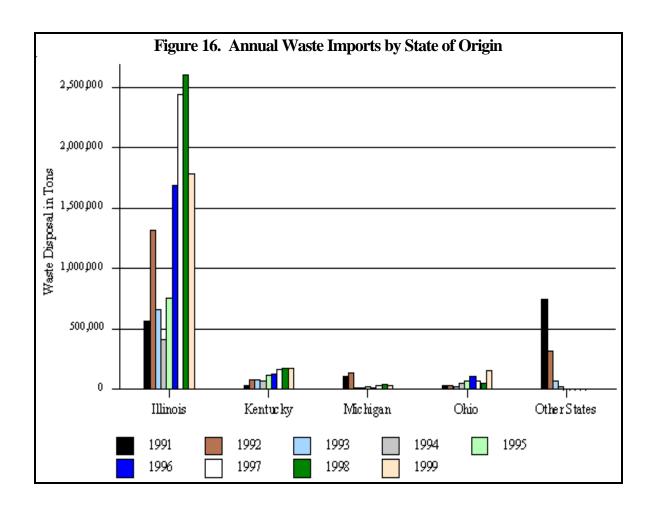


Table 18. Amount of Out-of-State Waste Received by Solid Waste Facilities by Facility Type and Waste Type during 1999

| | | 0 01 | | V1 C | | | | | | |
|---------------|---------------------------------------|--|----------------------|---------------------------|-----------------------------------|-------------------|--|--|--|--|
| | Tons of Waste Disposed | | | | | | | | | |
| Waste Type | Municipal Solid Waste Landfills | Construction/ Demolition Landfills | Non-MSW Landfills | Incinerators ¹ | Transfer Stations ¹ | All Facilities | | | | |
| Municipal | 1,474,524 | | | 11,603 | 22,520 | 1,508,647 | | | | |
| C/D | 220,928 | 23,098 | | | 423 | 244,449 | | | | |
| Foundry | 1,175 | | | | | 1,175 | | | | |
| Other Special | 365,503 | | 21,831 | 1,303 | | 388,637 | | | | |
| Coal Ash | | | | | | 0 | | | | |
| FGD Waste | | | | | | 0 | | | | |
| Other NonMSW | 4,662 | | | | 260 | 4,922 | | | | |
| TOTAL | 2,066,792 | 23,098 | 21,831 | 12,906 | 23,203 | 2,147,830 | | | | |

 $^{^{1}}$ No processing facilities other than transfer stations and incinerators received out-of-state waste during 1999.

Table 20 summarizes the annual amount of out-of-state waste received by Indiana's solid waste facilities during 1999. Table 21 provides a detailed look at the amount of waste that these facilities received from each state.

Although Indiana imports a considerable amount of solid waste, it also exports waste, primarily to contiguous states. A brief discussion of waste exports was provided in the previous section on solid waste processing facilities (see page 22).

"1999 Solid Waste Facility Profiles" at the end of this report provides more detailed summaries of waste imports to landfills, incinerators, and transfer stations.

Figure 17. Annual Amount of Out-of-State Waste Received by Solid Waste Facilities

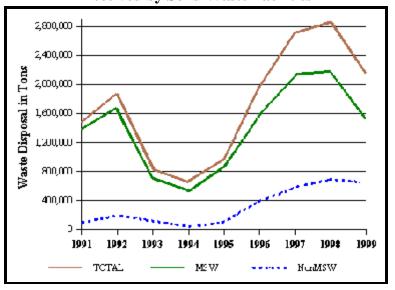


Table 19. Annual Amount of Out-of-State Waste Received by Solid Waste Facilities by Facility Type and Waste Type

| | racinities by racinity Type and Waste Type | | | | | | | | | |
|--------------------------|--|----------------|---------------|---------|---------|---------|---------------|---------------|-----------|-----------|
| Landfill | Waste | | | | Tons of | Waste D | isposed | | | |
| Type | Type | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
| Municipal | MSW | 1,361,702 | 1,649,096 | 692,849 | 501,115 | 841,125 | 1,521,449 | 2,100,837 | 2,157,833 | 1,474,524 |
| Solid Waste | NonMSW | 90,576 | 194,883 | 128,751 | 35,033 | 82,334 | 311,637 | 538,619 | 656,036 | 592,268 |
| Landfills ⁽¹⁾ | TOTAL | 1,452,278 | 1,843,979 | 821,600 | 536,148 | 923,459 | 1,833,086 | 2,639,456 | 2,813,869 | 2,066,792 |
| Construction/ | MSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Demolition | NonMSW | 0 | 0 | 0 | 3,297 | 6,775 | 77,398 | 39,468 | 29,234 | 23,098 |
| Sites | TOTAL | $\overline{}$ | $\overline{}$ | 0 | 3,297 | 6,775 | 77,398 | 39,468 | 29,234 | 23,098 |
| Nonmunicipal | MSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Solid Waste | NonMSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,404 | 21,831 |
| Landfills | TOTAL | $ \frac{1}{0}$ | $\overline{}$ | 0 | 0 | 0 | $\overline{}$ | $\overline{}$ | 2,404 | 2,404 |
| Incinerators | MSW | 412 | 2,488 | 1,119 | 2,409 | 2,560 | 7,777 | 5,228 | 5,488 | 11,603 |
| (nonhospital) | NonMSW | 483 | 270 | 0 | 0 | 171 | 599 | 855 | 1,505 | 1,303 |
| | TOTAL | 895 | 2,758 | 1,119 | 2,409 | 2,731 | 8,376 | 6,083 | 6,993 | 12,906 |
| Transfer | MSW | 24,383 | 19,454 | 18,118 | 26,898 | 24,202 | 22,604 | 10,448 | 17,988 | 22,520 |
| Stations ⁽²⁾ | NonMSW | 65 | 27 | 367 | 640 | 6,621 | 604 | 519 | 737 | 683 |
| | TOTAL | 24,448 | 19,481 | 18,485 | 27,538 | 30,823 | 23,208 | 10,967 | 18,725 | 23,203 |
| All | MSW | 1,386,497 | 1,671,038 | 712,086 | 530,422 | 867,887 | 1,551,830 | 2,116,513 | 2,181,309 | 1,508,647 |
| Facilities | NonMSW | 91,124 | 195,180 | 129,118 | 38,970 | 95,901 | 390,238 | 579,461 | 689,916 | 639,183 |
| | TOTAL | 1,477,621 | 1,866,218 | 841,204 | 569,392 | 963,788 | 1,942,068 | 2,695,974 | 2,871,225 | 2,147,830 |

⁽¹⁾ This reflects only the tonnages of out-of-state waste shipped directly to MSW landfills. Most of the out-of-state waste received by transfer stations was sent to Indiana MSW landfills for final disposal. However, these MSW landfills reported the origin of this out-of-state waste as the county in which the transfer station was located, rather than the state in which the waste originated, in accordance with IDEM guidance.

⁽²⁾ Between 1991 and 1996, the majority of this waste was sent to Indiana final disposal facilities. In 1997, 30% of out-of-state waste received by Indiana facilities was sent to either MI or KY facilities for disposal. In 1998, 45% was sent out-of-state for disposal mostly to MI or KY. The transfer station exports decrease again in 1999, when 27% of out-of-state waste received (6,265 tons) was sent to other states, mostly KY.

Figure 18. Distribution of Disposal of Out-of-State Waste Received at Indiana Solid Waste Facilities during 1999

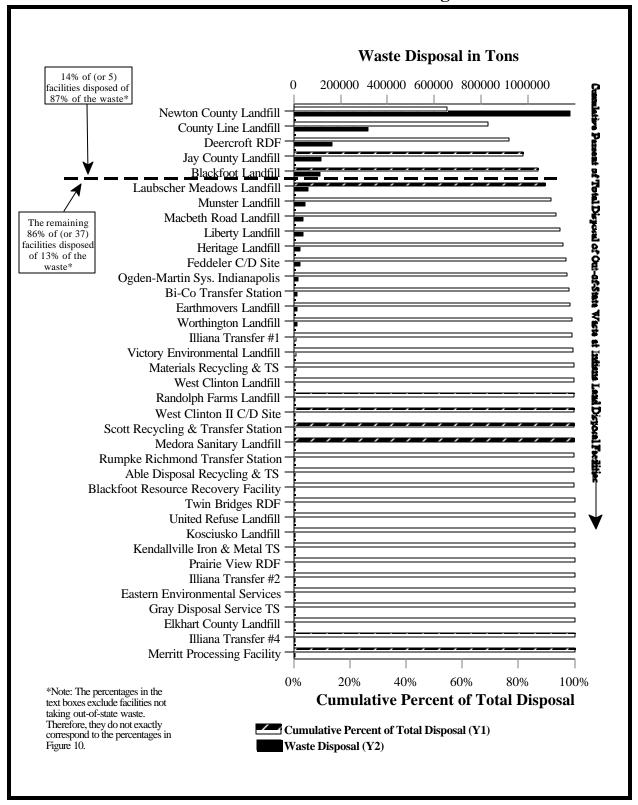
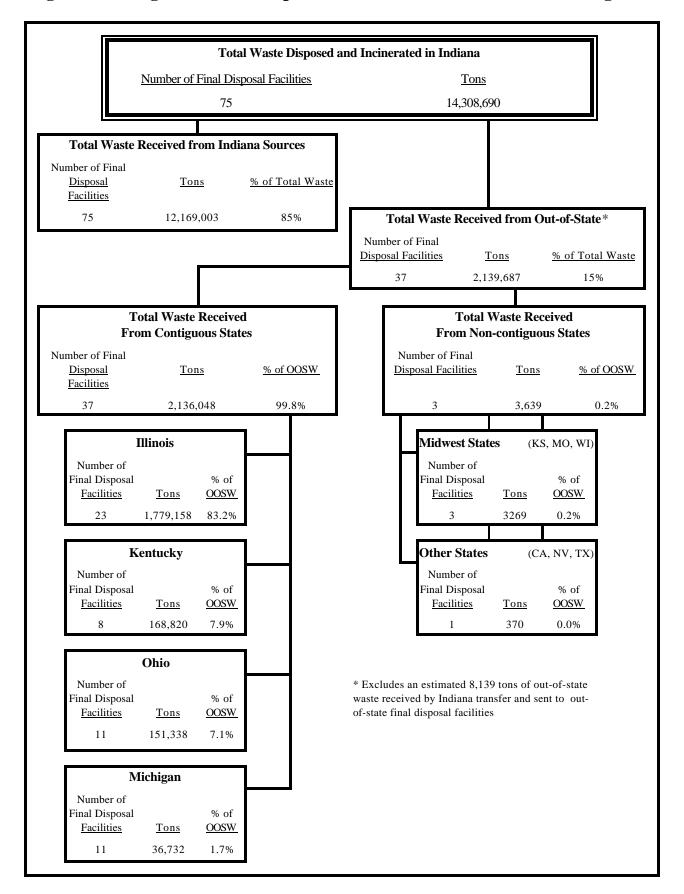


Table 20. Total Out-of-State Waste Received by Facility during 1999

| County Location of Facility | Facility Name | Type of Facility | Tons of Out-of-State Waste Received |
|-----------------------------------|--|------------------------------|--|
| Allen | Macbeth Road Landfill | MSW Landfill | 36,370 |
| Allen | United Refuse Landfill | MSW Landfill | 193 |
| Clark | Bi-Co Transfer Station | Transfer Station | 11,108 |
| De Kalb | Merritt Processing Facility | Transfer Station | 2 |
| Elkhart | Earthmovers Landfill | MSW Landfill | 10,802 |
| Elkhart | Elkhart County Landfill | MSW Landfill | 6 |
| Fulton | County Line Landfill | MSW Landfill | 310,795 |
| Greene | Worthington Landfill | MSW Landfill | 10,717 |
| Harrison | Gray Disposal Service Transfer Station | Transfer Station | 8 |
| Hendricks | Twin Bridges Recycling & Disposal Facility | MSW Landfill | 209 |
| Jackson | Medora Sanitary Landfill | MSW Landfill | 362 |
| Jay | Jay County Landfill | MSW Landfill | 112,026 |
| Knox | Eastern Environmental Services | Transfer Station | 18 |
| Kosciusko | Kosciusko Landfill | MSW Landfill | 138 |
| La Porte | Deercroft Recycling and Disposal Facility | MSW Landfill | 159,036 |
| Lagrange | Scott Recycling & Transfer Station | Transfer Station | 1,013 |
| Lake | Feddeler C/D Site | Construction/Demolition Site | 21,754 |
| Lake | Illiana Transfer #1 | Transfer Station | 6,062 |
| Lake | Illiana Transfer #2 | Transfer Station | 44 |
| Lake | Illiana Transfer #4 | Transfer Station | 3 |
| Lake | Munster Landfill | MSW Landfill | 44,230 |
| Marion | Ogden-Martin Systems of Indianapolis | Incinerator | 12,906 |
| Newton | Newton County Landfill Partnership | MSW Landfill | 1,174,481 |
| Noble | Kendallville Iron & Metal Transfer Station | Transfer Station | 94 |
| Pike | Blackfoot Landfill | MSW Landfill | 109,547 |
| Pike | Blackfoot Resource Recovery Facility | Transfer Station | 260 |
| Porter | Able Disposal Recycling and TS | Transfer Station | 304 |
| Putnam | Heritage Landfill | Non-MSW Landfill | 21,831 |
| Randolph | Randolph Farms Landfill | MSW Landfill | 1,415 |
| St. Joseph | Prairie View Recycling and Disposal Facility | MSW Landfill | 50 |
| Vanderburgh | Laubscher Meadows Landfill | MSW Landfill | 55,483 |
| Vanderburgh | Materials Recycling and Transfer Station | Transfer Station | 3,966 |
| Vermillion | West Clinton II C/D Site | Construction/Demolition Site | 1,344 |
| Vermillion | West Clinton Landfill | MSW Landfill | 1,927 |
| Vigo | Victory Environmental Landfill | MSW Landfill | 4,716 |
| Wayne | Rumpke Richmond Transfer Station | Transfer Station | 321 |
| White | Liberty Landfill | MSW Landfill | 34,289 |
| Total for All | Facilities | | 2,147,830 |

Figure 19. Origin of Waste Disposed and Incinerated in Indiana during 1999



| County | Facility | Facility | Contiguous States | | | | Other States | | | | | | Total | ĺ |
|--------------------------|--|-------------------------|-------------------|---------|--------|---------|--------------|----|-------|-----|-----|-------|-----------|--------|
| Name | Name | Type | IL | KŸ | MI | OH | CA | KS | MO | NV | TX | WI | Tons | |
| Allen | National Serv-All Landfill | MSW Landfill | | | 21,733 | 14,637 | | | | | | | 36,370 | 1.69% |
| Allen | United Refuse Landfill | MSW Landfill | | | | 193 | | | | | | | 193 | 0.01% |
| Clark | Bi-Co Transfer Station | Transfer Station | | 11,108 | | | | | | | | | 11,108 | 0.52% |
| De Kalb | Merritt Processing Facility | Transfer Station | | | 2 | | | | | | | | 2 | 0.00% |
| Elkhart | Earthmovers Landfill | MSW Landfill | | | 10,802 | | | | | | | | 10,802 | 0.50% |
| Elkhart | Elkhart County Landfill | MSW Landfill | | | 6 | | | | | | | | 6 | 0.00% |
| Fulton | County Line Landfill | MSW Landfill | 310,470 | | 325 | | | | | | | | 310,795 | 14.47% |
| Greene | Worthington Landfill | MSW Landfill | 10,717 | | | | | | | | | | 10,717 | 0.50% |
| Harrison | Gray Disposal Service Transfer Station | Transfer Station | | 8 | | | | | | | | | 8 | 0.00% |
| Hendricks | Twin Bridges RDF | MSW Landfill | 209 | | | | | | | | | | 209 | 0.01% |
| Jackson | Rumpke (Medora) Landfill | MSW Landfill | | 2 | | 360 | | | | | | | 362 | 0.02% |
| Jay | Jay County Landfill | MSW Landfill | | | | 112,022 | | | | | | | 112,022 | 5.22% |
| Knox | Eastern Environmental Services | Transfer Station | 18 | | | | | | | | | | 18 | 0.00% |
| Kosciusko | Ransbottom Landfill | MSW Landfill | 1 | | 31 | 106 | | | | | | | 138 | 0.01% |
| Lake | Feddeler C/D Site | Construction/Demolition | 21,754 | | | | | | | | | | 21,754 | 1.01% |
| Lake | Illiana I Transfer Station | Transfer Station | 6,062 | | | | | | | | | | 6,062 | 0.28% |
| Lake | Illiana II Transfer Station | Transfer Station | 44 | | | | | | | | | | 44 | 0.00% |
| Lake | Illiana IV Transfer Station | Transfer Station | 3 | | | | | | | | | | 3 | 0.00% |
| Lake | Munster Landfill | MSW Landfill | 44,230 | | | | | | | | | | 44,230 | 2.06% |
| Lagrange | Scott Recycling Facility | Transfer Station | | | 1,013 | | | | | | | | 1,013 | 0.05% |
| La Porte | Deercroft RDF | MSW Landfill | 155,661 | | 2,769 | | | | | | | 606 | 159,036 | 7.40% |
| Marion | Indianapolis Resource Recovery Facility | Incinerator | 8,613 | 198 | 12 | 1,110 | 93 | 60 | 1,875 | 155 | 122 | 668 | 12,906 | 0.60% |
| Newton | Newton County Landfill Partnership | MSW Landfill | 1,174,481 | | | | | | | | | | 1,174,481 | 54.68% |
| Noble | Kendallville Iron & Metal Trans. Station | Transfer Station | | | 81 | 13 | | | | | | | 94 | 0.00% |
| Pike | Blackfoot RDF | MSW Landfill | 3,968 | 105,579 | | | | | | | | | 109,547 | 5.10% |
| Pike | Blackfoot Resource Recovery Facility | Transfer Station | 260 | | | | | | | | | | 260 | 0.01% |
| Porter | Able Disposal Rec. & Trans. Station | Transfer Station | 57 | | 247 | | | | | | | | 304 | 0.01% |
| Putnam | Heritage Landfill | Non-MSW Landfill | 305 | 34 | | 21,432 | | | 60 | | | | 21,831 | 1.02% |
| Randolph | Randolph Farms Landfill | MSW Landfill | | | | 1,415 | | | | | | | 1,415 | 0.07% |
| St. Joseph | Prairie View RDF | MSW Landfill | 50 | | | | | | | | | | 50 | 0.00% |
| Vanderburgh | Laubscher Meadows Landfill | MSW Landfill | | 55,483 | | | | | | | | | 55,483 | 2.58% |
| Vanderburgh | Materials Rec. & Trans. Station | Transfer Station | 2 | 3,964 | | | | | | | | | 3,966 | 0.18% |
| Vermillion | West Clinton II C/D Site | Construction/Demolition | 1,344 | | | | | | | | | | 1,344 | 0.06% |
| Vermillion | West Clinton Landfill | MSW Landfill | 1,927 | | | | | | | | | | 1,927 | 0.09% |
| Vigo | Victory Environmental Landfill | MSW Landfill | 4,716 | | | | | | | | | | 4,716 | 0.22% |
| Wayne | Richmond Transfer Station | Transfer Station | | | | 321 | | | | | | | 321 | 0.01% |
| White | Liberty Landfill | MSW Landfill | 34,288 | | | 1 | | | | | | | 34,289 | 1.60% |
| Total for All Facilities | | | 1,779,180 | 176,376 | 37,021 | 151,610 | 93 | 60 | 1,935 | 155 | 122 | 1,274 | 2,147,826 | |

Table 21. Out -of-State Waste Received by Indiana Solid Waste Facilities during 1999

IMPORTANT NOTE: Highlighted facilities have NOT submitted 4th quarter reports, data is incomplete